N.A.C.A. BULLETIN

In Two Sections

Section One

A CASE STUDY OF SMALL BUSINESS CONTROLS

by CLINTON W. BENNETT

VOL. XXIX, NO. 16 APRIL 15, 1948

EDITORIAL DEPARTMENT NOTE

At any particular point in time, the tools of industrial accounting have reached a certain stage of development. Exactly what the stage represents in terms of accepted practice and availability of techniques with which to solve the pressing problems of everyday accounting control, evolves only slowly, especially in a period of rapid development of phases of practice and of experimental techniques. Nevertheless, this knowledge is badly needed and by none more than by the small businessman and his professional counselors. They need to have a clear conception of what practices can be labeled with reasonable certainty as feasible in achieving continuous and up-to-the-minute control of operations.

For this reason, it is extremely worth while when an experienced accountant and management engineer undertakes to set down in an orderly and compact form a system of production, cost, and general controls for a small business, avoiding too many alternatives and not dwelling on doubtful points but offering as best the course commended by his judgment. Such points still remain open on the broad picture of the growth of industrial accounting, but the managements of companies most needing the guidance of accounting controls are offered a present picture that is clear in every essential.

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This *Bulletin* is published semimonthly by the National Association of Cost Accountants, 385 Madison Ave., New York 17, N. Y. Subscription price, $10 per year. Entered at the Post Office, New York, N. Y., as second-class matter, August 28, 1925, under the Act of March 3, 1879.

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APRIL 15, 1948

A CASE STUDY OF SMALL BUSINESS CONTROLS

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AS THIS is being written prices, production, sales, and employment are at all time highs for the American economy. Businessmen are literally and actually operating in uncharted seas because there is no precedent for things as they are. Operating and accounting controls as aids to management, particularly in small and medium sized businesses, are needed as never before. It is intended to present in this article some ideas and procedures which have been found of practical operating value not only in the field of accounting and cost control but also in the broader areas of operating control.

What Is Small Business?

A release of the Committee for Economic Development, dated June 1947, states "Ninety-eight per cent of the firms operating in this country today are small businesses. They are the foundation upon which our whole system of business enterprise is built." Small business is defined as an enterprise with fifty employees or less. We hear so much about big business and the effect of big business upon our economic life that a realization that only two per cent of the business firms operating in this country employ more than fifty persons is indeed revealing and important.

My own personal definition of small business is somewhat broader and is not related necessarily to numbers of employees. In my book small business has shirt-sleeve management. A small business is one with ownership management in which the manager's capital rides on each decision he makes. But regardless of the definition, the fact remains that small business, namely owner-managed business, constitutes the great majority of the industrial and commercial enterprises of the United States, furnishes the bulk of the employment, and provides the basic support for our entire economic system of individual initiative and free enterprise. Anything which affects small business affects you and me.

Approach to the Problem

At this point it may be pertinent to inquire just how the production, cost, and accounting problems of small business vary from

the requirements of big business. The answer is that in their fundamentals there is no difference. The same operating principles and concepts apply whether we are dealing with one of America's great corporations or with a small machine shop down on the corner. The difference comes from a realistic appreciation of the extent to which the detail procedures shall be superimposed on the basic essential structure in order to provide the information which the management needs in each set of circumstances. All procedures outlined herein represent practices in use in small business.

Production Control

Fundamentals

No manufacturing business is so small or so simple that it can afford the luxury of not operating a production planning and control system, which will in fact plan, schedule, and control production.

Subject to management policies and manufacturing and sales requirements it is the job of the production control section to: (1) determine what products shall be made, (2) say when they shall be made, (3) decide the quantity to be made and (4) keep posted on the progress of the work through the shop so that schedules will be met or, if not, to ascertain the reasons why, so that schedules can be revised and the sales department and customers notified accordingly. The work of the production control section will also include the writing of manufacturing orders and the maintaining of perpetual inventory records. These are basic activities which make possible the functioning of the planning department. The correlation of these activities should be handled by a man who is familiar with factory conditions. He must have entire charge of the production control job with sufficient authority to supervise and control the work as a whole.

Duties of Production Control Personnel

Obviously the production control personnel will depend entirely upon the requirements of the particular business and may range all the way from a single individual to a sizeable department. One successful operation provided production control personnel which consisted of the following two groups: (1) a clerical group whose duties consisted generally in the maintenance of perpetual inven-

tory records, the preparation of manufacturing and assembly orders, purchase requisitions, requisitions for raw material, posting of production data reported by the shop, and other kindred functions and (2) a shop group to consist of dispatchers in the various departments under the general supervision of the planning chief's shop assistant. This assistant made promises as to completion and followed the work to see that it was produced according to schedule.

The principal activities of the dispatchers were: (1) count pieces of material received in the department on each order, (2) control the manufacturing order from the time of issuance to the department until its completion, (3) prepare route sheets to follow the work, (4) prepare job time tickets covering each operation, (5) assign work or jobs to each operator in cooperation with the foremen, (6) prepare daily production reports covering orders completed in each department and see that completed work is forwarded to the next department, (7) verify count after each operation by calculations, (8) post good and defective pieces to job tickets, (9) count pieces completed after last department operation.

It should be the responsibility of the production control department to establish delivery dates, requisition material to be used for the various orders, establish the order of processing whenever necessary and ascertain that goods are manufactured and delivered in accordance with instructions issued by the department. All contacts with the plant personnel in regard to production orders should be made by the production control department. It is fundamental that no work shall be started without a shop order issued by the production control department, that the changing of shop orders by any member of the plant personnel will not be permitted, and that the diversion of material from one shop order to another will be allowed only through the authorization of the production control department.

Basic Records

Reduced to its fundamentals the control of production requires the following five classes of records: (1) manufacturing order, (2) production control sheet, (3) identification tag or route card, (4) production report, (5) perpetual inventory. Regardless of the complications that may be involved in any specific situation these five basic records are fundamental.

Manufacturing Order.—When the sales order arrives in the production control department it will be turned over to the inventory clerk to determine whether shipment can be made from stock or what part may have to be manufactured. At this time commitments will be posted in the inventory records and if necessary entry made on the orders accumulation records. If a shortage of any particular part exists the manufacturing order, Exhibit 1, will be issued.

MANUFACTURING ORDER

Date Issued	Pattern No.	Drawing No.	Order No.
Date Wanted	Material	Mat. Req. No.	Quantity
Type	Size	Product	

Special Instructions

INSPECTOR'S REPORT

Date	Good Pieces	Defective Pieces	Spoiled Pieces	Lost Pieces	Signature

EXHIBIT 1

One copy of the manufacturing order will be sent to all departments so that each will be informed as to the work to come and the promised or scheduled dates. A copy will be retained in the production control department. Each day when the production reports come through the quantities produced will be posted to the appropriate manufacturing orders so that the production control department will always know the status of an order in a department prior to completion of the work in the department as a whole. When the order has been filled in any department the

PRODUCTION CONTROL SHEET

Dept. _____

Shop Ord. No.	Description	Quantity		Date		Date Completed			Date		Remarks
		Started	Finished	Order Issued	Promised				Shipped	To Stores	

EXHIBIT 2

department copy of the shop order will be returned to the production control department.

Production Control Sheet—When a manufacturing order is issued it will be posted to the production control sheet, Exhibit 2. As stated previously, no work shall be started without a manufacturing order and every shop order issued must be entered on the production control sheet. The control sheet is a particularly simple illustration yet it is effective under conditions to which it applies. Varied and elaborate control sheets or control boards are sometimes called for in particularly large or complicated situations, but regardless of the plan used fundamental principles remain, namely, that every order issued must be recorded on the control sheet or control board and this control mechanism must show the status of the order at all times.

In the small plant data concerning production will usually not be entered on the production control sheet until the goods are completed in a department and deliv-

ered to a subsequent operating department or to stores. Knowledge of production from day to day within a department will be obtained by posting from the daily production report to the manufacturing order. If a partial lot is sent through to any subsequent department the date and quantities will be noted on the production control sheet. When all the work called for by a shop order is completed by any department that department will return its copy of the shop order to the production control department. This will be the notice to the production control department that work has left the manufacturing department in question and entry will be made on the control sheet accordingly. The shop order copy will then be destroyed.

Route Card—The route card, Exhibit 3, will be prepared in the production control department for each order entered in the shop. This card will show the order number, the quantity, and the operations through which the work shall pass. It will be issued by

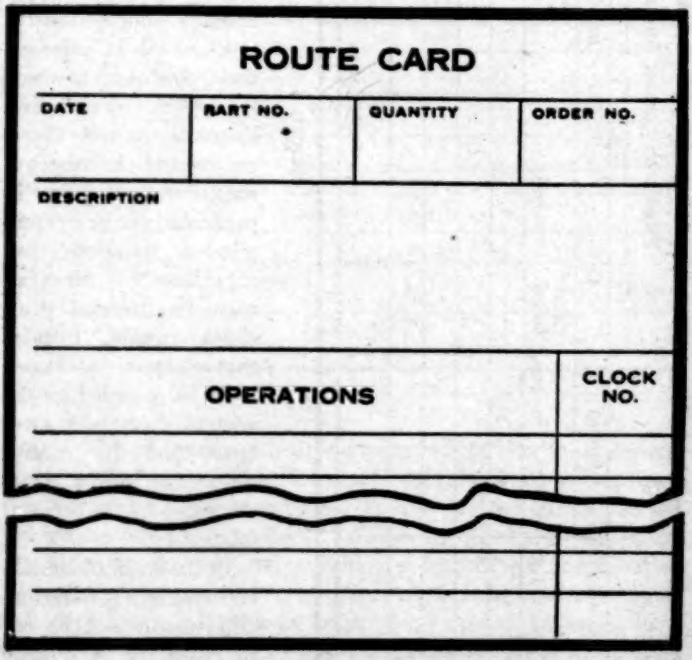


EXHIBIT 3

DAILY PRODUCTION REPORT

SHOP ORDER		PCS	DESCRIPTION	
NUMBER	PCS.	FINISHED	PART NO.	PART NAME
DATE		SIGNATURE		

EXHIBIT 4

the dispatcher as the parts move to the first operation and remain with the work until the order has been completed. Upon the completion of each operation the employee will enter his clock number on the route card. The employee will also report the pieces completed and the pieces spoiled to the dispatcher who will note this information on the labor ticket. Upon the completion of the order the route card should be forwarded to the inspection department and used in determining the source of defective parts.

Production Report—The daily production report, illustrated in Exhibit 4, is essential to the successful operation of any plan of production control. It will be prepared by the dispatcher from the shop orders completed during the day or if departmental dispatchers are not used it will be prepared by some person designated in each department and forwarded each morning promptly to the production control department. This report will serve as a signal to the production planning department that the items called for by the orders have been delivered to (1) a subsequent department, (2) the inspection department, (3) the stockroom, or (4) the shipping department. This report not only makes possible the control of production, but enables the department to expedite such work as may be urgently needed.

INVENTORY CARD

1 DATE	2 S	3 MFG. OR PUR. ORDER NO.	4 QUANTITY	5 PRO'S OR ORD. BALANCE	6 REC'D	7 ISSUED	8 STOCK BALANCE	9 DATE	10 MFG. OR CUST ORDER NO.	11 CUST'R	12 COMMIT-MENTS	13 UNFILLED BALANCE	14 CONTROL BALANCE 8+9−12

Perpetual Inventory—Sound and adequate stores control is a fundamental essential of any plan of production control. Stores control is subdivided into (1) physical control and (2) record control. Regardless of the size of the business all physical stores should be segregated into properly designed and centrally located stock rooms. These stock rooms should be available only to such individuals as may be given responsibility for stores maintenance and should be kept under lock and key. There are few operations in the factory which will pay off more handsomely than will adequate control over physical stores.

Perpetual inventory records should be maintained on a quantity basis only in the usual small business without entering values on the inventory cards. No perpetual inventory records need be maintained for stock which, because of its bulk or small quantities, can be inventoried easily on a physical basis at the end of each month or at such times as quantities are desired. An inventory card is illustrated in Exhibit 5 for control of those stores which require record control in addition to physical control. This card will provide a highly effective control mechanism over inventories on hand, quantities on order, and applications of stock to specific orders. Column 5 shows the balance on order either with vendors or in production; column 8 shows the actual quantities of stock on hand; column 12 shows the commitments that have been made; and column 13 discloses the balance available for future orders.

Daily Inventory Verification Procedure—The daily inventory verification is an essential part of the perpetual inventory control plan. It (1) increases the accuracy of the inventory records because of the continuous checkup of specific items and (2) may eliminate physical inventories at the end of the fiscal periods after the plan of verification has been in operation long enough to warrant confidence in it. The daily verifications should be worked out on a schedule which will result in the entire inventory being physically counted at least twice each year. Procedure for daily inventory verification is indicated in the seven points listed below and the forms illustrated in Exhibit 6.

1. Inventory clerk makes out Request For Inventory Count covering predetermined number of items for each inventory classification each day and sends to foreman of department affected. Quantity shown by inventory card is *not* put on Request For Inventory Count at time it is sent to foreman.
2. Department foreman supervises the count of the requested items and returns the Request For Inventory Count to factory office as soon as count has been made, first initialing as approved.

DAILY INVENTORY VERIFICATION FORMS

REQUEST FOR INVENTORY COUNT				
Date 5/28/42		Dept.	No.	
Description				
Time Started		Location	Quantity	
Count	Recount		Count	Recount
9 A.M	3 P.M.		252	252
		Total Counted	252	252
		Inventory Record	250	250
		Difference	2	2
Count by		Recount by		
Approved		Approved		

RECONCILIATION OF COUNT	
Balance Per Inventory Card	500
Add:	
Deduct: Material requisition not entered	250
Adjusted Balance	250
Counted	252
Difference	2
Explanation of Difference	
Reconciled by	Approved

INVENTORY ADJUSTMENT VOUCHER									
Inventory Classification Work in Process						Month May 1942			
Date of Count	Description	Stk. Rec. Adj.	Inventory			Difference		Unit value	Adjustment
			Stk. Rec.		Count	Over	Short		Over Short
5/28		V	250		252	2			

EXHIBIT 6

3. Factory office manager receives results of count and makes reconcilation with quantity shown on inventory card using Reconciliation of Count form provided on reverse side of the Request For Inventory Count.
4. If the reconciliation procedure mentioned in 3 above does not account for the difference between the quantity counted and that shown by the inventory card, the procedure for locating the difference as outlined will be carried out. If the difference is still unaccounted for, a recount will be requested.
5. If there is still a difference between the inventory record and the recount, the inventory record will be checked. If this does not reveal the difference the necessary adjustment will be listed on the Inventory Adjustment Voucher, and the inventory card balance will be adjusted.
6. Whenever a physical count has been made, a record of the date, quantity counted, and quantity shown by the inventory card will be recorded on the inventory card.
7. The Reconciliation of Count forms will be submitted to the plant manager for his approval.

LABOR JOB CARD

Name			Clock No
Dept.		Order No.	
Part Name			Part No.
Mach. No.		No. of Pcs.	
Operation			Def. Pcs.
Next Operation			
F	Special Work		
S	Elapsed Time	Hourly Rate	Amount
F			
	No. of Pieces	Approved	
S			

EXHIBIT 7

Labor Job Card—If production is scheduled within departments the departmental dispatcher will prepare a labor job card (Exhibit 7) in duplicate for each operation performed by a productive worker. These cards will be prepared in advance so that no time will be lost between reporting "finished" on one job and starting another. Both copies of the card are to be time-stamped at the time of starting the job. The original will be given to the operator and the duplicate held on the dispatcher's control board until the task is completed. When the operation is finished the worker will deliver his copy of the card to the dispatcher who will time-stamp both copies and enter the number of pieces finished and spoiled.

The originals will be forwarded to the payroll department daily where they will be computed and used in preparing the factory payroll. The duplicate, at the completion of the operation, will be used to make out the labor job ticket for the next operation and may then be forwarded to the cost department.

The departmental dispatcher's control board is usually set up by machines or work locations although in exceptional cases the work may be scheduled by employees.

Accounting and Cost Control

Essentials of the System

The accounting and cost methods should be designed with a view to three objectives: (1) the information desired by the management, (2) the basic controls which are essential in the particular type of business, and (3) the procedures which will achieve these objectives with a minimum of routine and book work.

The cost system must show: (1) the calculated or anticipated cost of all products according to cost elements, (2) comparison of these anticipated costs with actual results and determination of the reasons for any differences, (3) effectiveness of the utilization of all cost elements, material, labor, burden, and of plant capacity, (4) basis for measuring departmental performances against accepted standards.

The accounting plan obviously must provide an effective structure for recording and controlling financial transactions. In addition, it must be capable of so controlling and proving the cost system through the financial books that the preparation of an analytical statement of profit and loss by products promptly at the end of each month is both feasible and practical. The accounting and cost system therefore must make possible (1) development of the monthly analytical profit and loss statement, (2) data for continuous cost control and cost reduction wherever feasible, and (3) information for revising and checking selling prices.

A standard cost system will best meet these modern essential requirements of small business. Usually the only exceptions to this rule are job shops. With a properly devised and installed standard cost system in operation, the costs of the various products are indicated as the normal cost of these products over a period of several years, thereby eliminating drastic fluctuations either on

the up or down side. When these standard costs have been established, and the results which flow from them month by month are properly controlled through the accounting system, the management will be provided with an invaluable yardstick for measuring operations and for determining upon sound production and sales problems.

Developing the System

Usual steps in the development and installation of a standard cost system are as follows:

1. Prepare the chart of accounts.
2. Determine upon the cost control structure.
3. Decide the form of the profit and loss statement.
4. Set up cost standards for material, labor, and burden, and the associated standards for operating performances.
5. Set up standard costs for specific products.
6. Prepare profit and loss statements and supporting control data.

Chart of Accounts

The chart of accounts, Exhibit 8, shows the following nine major account classifications:

Assets

1. Current assets.
2. Fixed assets, intangibles, deferred charges.

Liabilities

3. Current liabilities.
4. Valuation reserves.
5. Fixed liabilities, capital stock, and surplus.

Income and Expense

6. Sales, deductions, cost of sales.
7. Manufacturing burden.
8. Commercial burden.
9. Other income and charges.

Three digits constitute an account symbol. The first is the major classification, combination of the first and second the secondary classification, while the three digits form the symbol of the specific account. For example, 1 indicated current assets, 10 cash, and 100 petty cash. If it is found desirable to add department numbers to the account symbols this may be done readily by inserting a decimal point between the department number and the basic account symbol. Also if the problems of a particular company require greater elaboration calling for more accounts in a section, this can be done readily by using four digits for each

CHART OF ACCOUNTS

ASSETS

1. Current assets:
   - 10. Cash:
     - 100 Petty cash funds
     - 102 Cash in banks
   - 11. Accounts and notes receivable:
     - 110 Accounts receivable—trade
     - 111 Accounts receivable—other
     - 112 Notes receivable—trade
     - 113 Notes receivable—other
   - 12. Liquid investments:
     - 120 U. S. government securities
     - 121 Other marketable securities
     - 122 Life insurance cash surrender value
   - 13. Accruals:
     - 130 Interest receivable accrued
   - 14. Inventories:
     - 140 Raw material A
     - 141 Raw material B
     - 142 Raw material C
     - 143 Other direct materials
     - 144 Packing materials
     - 145 Work in process
     - 146 Finished goods
     - 147 Factory supplies
     - 148 Fuel
     - 149 Office supplies and postage
2. Fixed assets, intangibles, deferred charges:
   - 20. Land:
     - 200 Land
     - 205 Land improvements
     - 209 Reserve for depreciation
   - 21. Buildings:
     - 210 Building
     - 215 Reserve for depreciation
     - 216 Building equipment
     - 219 Reserve for depreciation
   - 22. Machinery and equipment:
     - 220 Machinery and equipment
     - 221 Reserve for depreciation
     - 222 Power and steam plant
     - 223 Reserve for depreciation
     - 224 Tools
     - 225 Reserve for depreciation
     - 226 Plant furniture and fixtures
     - 227 Reserve for depreciation
     - 228 Patterns and drawings
     - 229 Reserve for depreciation
   - 23. Transportation facilities:
     - 230 Autos and trucks
     - 231 Reserve for depreciation
   - 24. Furniture and fixtures:
     - 240 Office furniture
     - 241 Reserve for depreciation
     - 242 Office equipment
     - 243 Reserve for depreciation
   - 25. Construction in process:
     - 250 Construction in process
   - 26. Fixed investments:
     - 260 Investments
   - 27. Intangibles:
     - 270 Goodwill
     - 271 Patents
     - 275 Trademarks
   - 28. Deferred charges:
     - 280 Interest prepaid
     - 281 Taxes prepaid
     - 284 Insurance prepaid

LIABILITIES

3. Current liabilities:
   - 30. Accounts and notes payable:
     - 300 Accounts payable—trade
     - 301 Accounts payable—other
     - 302 Dividends declared
     - 303 Social security taxes withheld
     - 304 Federal income taxes withheld
     - 305 Customers' deposits
     - 306 Notes payable—banks
     - 307 Notes payable—trade
     - 308 Notes payable—other
   - 31. Accruals:
     - 310 Salaries and wages accrued
     - 311 Commissions accrued
     - 312 Employees' vacations accrued
     - 313 Social security taxes accrued
     - 314 State and local taxes accrued
     - 315 Provision for income taxes
     - 316 Interest payable accrued
     - 317 Compensation insurance accrued
     - 318 Provision for bad debts
4. Valuation reserves:
   - 40. Reserve for amortization:
     - 401 Amortization of patents
     - 405 Amortization of trademarks
   - 41. Reserves for contingencies:
     - 410 Reserves for contingencies
5. Fixed liabilities, capital stock and surplus:
   - 50. Fixed liabilities:
     - 500 Long term debt
   - 51. Capital stock and surplus:
     - 510 Capital stock preferred
     - 511 Capital stock common
     - 512 Capital surplus
     - 513 Earned surplus
     - 514 Profit and loss
     - 515 Dividends preferred stock
     - 516 Dividends common stock

CHART OF ACCOUNTS

INCOME AND EXPENSE

6. Sales, deductions, cost of sales:
   - 60. Sales:
     - 600 Sales, product A
     - 601 Sales, product B
     - 602 Sales, product C
   - 61. Returns and allowances (610-611-612)
   - 64. Commissions to agents or jobbers (640-641-642)
   - 67. Manufacturing cost of sales (670-671-672)
   - 68. Commercial cost of sales (680-681-682)
   - 69. Cost variances:
     - 690 Material quantity variances
     - 691 Material price variances
     - 692 Labor variances
     - 693 Manufacturing burden variances
     - 694 Commercial burden variances

7. Manufacturing burden:
   - 70. Supervision and clerical:
     - 700 Factory supervision
     - 701 Foremen and assistants
     - 702 Inspectors
     - 703 Methods and engineering
     - 704 Factory clerical
   - 71. Indirect labor:
     - 710 Departmental indirect labor
     - 711 Service labor
   - 72. Other labor and affiliated costs:
     - 720 Overtime and shift premiums
     - 721 Vacations and allowances
     - 722 Correcting defective work
     - 723 Pensions and pension plans
     - 724 Compensation insurance and accidents
     - 725 Group insurance
     - 726 Social security taxes
   - 73. Supplies:
     - 730 Fuel used
     - 731 Power, light and water
     - 732 Indirect materials
     - 733 Grease and oil
     - 734 General factory supplies
   - 74. Expense:
     - 740 Motor truck expense
     - 741 Transportation inward
     - 743 Research and laboratory
     - 744 Repairs and maintenance buildings
     - 745 Repairs and maintenance machinery
     - 748 General factory expense
   - 79. Fixed charges:
     - 790 Fire insurance
     - 791 Miscellaneous insurance
     - 792 Local taxes
     - 793 Other taxes
     - 794 Depreciation
     - 795 Amortization
     - 796 Rentals
     - 799 Burden clearing account

8. Commercial burden:
   - 80. Selling expense:
     - 800 Executive salaries
     - 801 Office salaries
     - 802 Salesmen's compensation
     - 803 Conventions and entertainment
     - 804 Sales traveling expense
     - 805 Sales auto expense
     - 806 Office supplies and expense
     - 807 Postage
     - 808 Telephone and telegraph
     - 809 Subscriptions and dues
     - 810 Light, heat and power
     - 811 Advertising
     - 812 Insurance
     - 813 Social security taxes
     - 814 Other taxes
     - 815 Depreciation
     - 816 Rentals
     - 817 Amortization
     - 818 Transportation outward
     - 819 Other selling expense
   - 86. Administrative expense:
     - 860 Executive salaries
     - 861 Office salaries
     - 862 Professional services
     - 863 Executive traveling
     - 864 Office supplies and expense
     - 865 Company auto expense
     - 866 Postage
     - 867 Telephone and telegraph
     - 868 Subscriptions and dues
     - 869 Donations
     - 870 Bad debts
     - 871 Light, heat and power
     - 872 Insurance—general
     - 873 Life insurance premiums
     - 874 Social security taxes
     - 875 Other taxes
     - 876 Depreciation
     - 877 Rentals
     - 878 Other administrative expense
     - 899 Burden clearing account

9. Other income and charges:
   - 90. Other income:
     - 900 Cash discounts received
     - 901 Interest received
     - 905 Sundry sales and income
     - 908 Net on sale of capital assets
   - 91. Other charges:
     - 910 Interest paid
     - 911 Cash discounts allowed
     - 912 Federal taxes on income
     - 916 Idle plant cost

EXHIBIT 8

account symbol instead of three. It is thus seen that this numerical code is highly flexible and will meet all essential requirements.

The accounts should be arranged in a loose-leaf ledger in the order indicated in the chart, with the result that the chart becomes an index to the ledger. Most of the accounts shown will be operated in the usual manner and with the exception of the three groups mentioned below they would be required by the usual business even if the cost system were not tied into the general ledger.

Classification 14 provides for the following inventory accounts:

140 Raw material A
141 Raw material B
142 Raw material C
143 Other direct materials
144 Packing materials
145 Work in process
146 Finished goods
147 Factory supplies
148 Fuel
149 Office supplies and postage

Where a continuous cost system is in use these accounts will contain inventory balances at the end of each month, otherwise they will simply accumulate purchases until the end of the fiscal period.

Cost variances accounts are provided in classification 69 as follows:

690 Material quantity variances.
691 Material price variances.
692 Labor variances.
693 Manufacturing burden variances.
694 Commercial burden variances.

Classification 7 shows the manufacturing burden accounts and classification 8 the commercial burden accounts. Balances are transferred at the end of the month from these detailed burden accumulation accounts to the burden cost variance accounts without the necessity of closing any of the accumulation accounts prior to the end of the fiscal year, by using the following two clearing accounts:

799 Manufacturing burden clearing account.
899 Commercial burden clearing account.

The four raw material accounts, 140 through 143, will usually be credited at the end of the month with the cost of materials actually used, as shown by requisitions or material consumption reports. Packing materials account 144 may be credited with the cost of actual consumption, but more frequently is adjusted each month to an inventory basis based on standard consumption figures.

Usually all work in process and finished goods are reflected in the work in process account until the goods are shipped when the appropriate transfer is made to manufacturing cost of sales. If sizable quantities of finished goods are carried this information can usually best be shown by perpetual inventory records in quantities without taking the additional detail step of carrying money values through a finished goods account in the general ledger. Operating a finished goods account simply imposes the additional detail job of pricing production in order to transfer balances from work in process to finished goods. However, a finished goods account is provided for those who need it.

Factory supplies and office supplies and postage can usually best be handled either on a standard consumption basis or on a standard inventory basis without resorting to tabulations of actual quantities used. Fuel should be inventoried monthly.

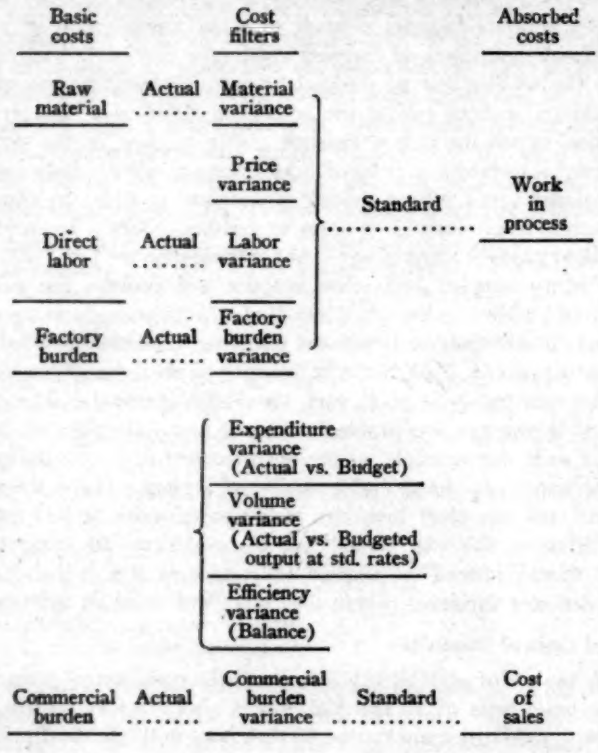
Account 916, idle plant cost, should be operated if idle plant carrying charges are sizable in amount and reflect special situations such, for example, as the abandonment of a manufacturing department or a considerable section of a plant. If, on the other hand, this idle plant item is a reflection of more or less normal occurrences, the cost should not be transferred to account 916 but should instead be allowed to remain in the manufacturing burden cost variances, where they will show up upon analysis.

Cost Control Structure

A review of Exhibit 9 will indicate the cost control procedure. The basic costs of all material, direct labor, factory burden, and commercial burden are started on their way in the form of primary expenditures. However, in the process of operations, goods in process and cost of sales are developed from them on the bases of predetermined standard or normal costs. The cost filters in the form of cost variances accounts show what happened in this transformation and provide a means of finding out why these things occurred.

Material Quantity Variances—Raw materials used during the month will be priced at actual cost and transferred from the appropriate raw materials accounts in the inventory section to account 690 material quantity variances account. The standard cost of the materials absorbed on the basis of work placed in process will be determined and credited to account 690, with an offsetting debit to account 145 work in process. This will leave the material

COST CONTROL STRUCTURE



Disposition of monthly variances

1. Unabsorbed costs:
   Deduct from profits on P & L statement
2. Overabsorbed costs:
   A. Portion earned on goods shipped—
      add to profits on profit and loss statement
   B. Portion earned on goods in inventory—credit to reserve for inventory valuation

EXHIBIT 9

quantity variances account showing as a debit or credit balance the amount by which actual and absorbed costs differed.

The next step is that of determining the effect of price variance. This can be done readily by costing the classified actual materials used during the month at the differences between actual purchase costs and the standard material costs. The sum of these results will reflect the price variance which can be transferred to the material price variances account. When this has been done the material quantity variances account will reflect differences in quantities or the usage variance.

Labor Variances—Account 692, labor variances, will be debited with the total actual direct labor cost for the month from the payroll analysis with an offsetting credit to account 310, salaries and wages accrued. The labor variances account will be credited with the labor absorbed on the basis of standards and the amount so credited will be debited to account 145, work in process.

Manufacturing Burden Variances—The total factory burden for the month will be tabulated from the accounts in the manufacturing burden section, credited to account 799, burden clearing account, and debited to account 693, manufacturing burden variances. The manufacturing burden absorbed during the month on the basis of cost standards will be credited to account 693, manufacturing burden variances, and debited to account 145, work in process. Account 693 will then reflect the amounts by which actual burden for the month and the planned burden failed to balance. This places the burden under control in total but it provides no answers to the question: Where did these differences take place and why? Perhaps the mere fact that the difference is small may lull the management into a sense of false security. Irrespective of the size of the manufacturing burden variance it is essential that the amount be analyzed for possible offsetting variances which may hide dangerous trends and, if allowed to continue, may develop badly. This burden analysis requires three steps to determine (1) expenditure variance, (2) volume variance, and (3) efficiency variance.

Accounts have not been provided for these three subdivisions of the factory burden variance account. Instead it is considered enough that they be compiled and accumulated statistically in support of the single factory burden variance control account. Not infrequently the same principle is applied to the material variances,

a single account being carried on the books and the two elements of quantity and price variance determined statistically in the same manner as factory burden variances.

The first step in this burden analysis is to determine the effect of variances in expenditures. This is entirely aside from volume or any other operating factor. It simply means comparing the actual expenditures for the month in each of the manufacturing burden accounts in classification 7 with the budgeted figures for each of these accounts. The difference will represent the expenditure variance and will be removed from the total factory burden variance balance.

The next step is to determine the volume variance. This is done by pricing both the actual volume and the budgeted volume at standard burden rates. As a result the amount of the burden variance caused by changes in volume either up or down is determined and this will be removed from the total factory burden variance.

Practically speaking, the remaining factory burden variance may usually be looked upon as an efficiency variance because it represents what is left after removing the effect of varying expenditures and of changing volume. If this remaining balance or so-called efficiency variance is sizable it should be explored further and a determination made but if it is a nominal amount, effort expended in attempting too detailed analysis will usually not prove particularly productive.

Commercial Burden Variances—The aggregate of the actual commercial expenses for the month in the accounts in classification 8 will be credited to 899, burden clearing account, and debited to account 694, commercial burden variances. Commercial burden absorbed on the basis of standard rates will be credited to the commercial burden variances account and debited to the 68 accounts, commercial cost of sales. If the company has an elaborate sales and distribution organization the commercial burden variances should be analyzed in the manner outlined for factory burden variances, because the triple problems of expenditure, volume, and efficiency variances will be present. If, on the other hand, the selling and distribution organization is small and not elaborate a critical review of the single commercial burden variance will frequently be sufficient to bring out the salient points for further consideration and control.

Cost Variances in General—The most important job that cost accounting can furnish the management each month is the prompt analysis of cost variances. Also of prime importance is the responsibility which devolves upon the cost accountant to leave no stone unturned to make sure that the operating executives and the top management are entirely conversant with the cost variance accounts and the important guide posts they provide to effective day to day operation. These cost filters are the stop and go signals for those who stand at the business throttle. They are the sailing orders without which the mariner proceeds at his peril.

Disposition of Monthly Variances

In a properly devised and operated standard cost system, the standard costs are considered to represent the real costs and the variances are differences which have crept into the structure due to the problems and conditions of the day. Sometimes these variances are sizeable in amount, many times they are simply nominal, but in all instances it is important in the interests of sound accounting and correct reporting for management purposes to handle them consistently and in a sound manner. Not infrequently, cost variances are charged or credited to cost of sales in the month to month figures. This is unsatisfactory because the cost of sales accounts should represent, according to products, the cost of the sales of those products at standard costs for contrast with the sales in each product classification. When the factor of cost variances is introduced into the cost of sales accounts this comparison of standard costs and sales is lost and the cost of sales account simply becomes a picture of what actually happened without providing any basis of analysis.

It would seem that the logical place to charge unabsorbed cost variances is against profits on the profit and loss statement. On the other hand, overabsorbed cost variances usually provide a two-way problem. The cost variance credits are represented by accumulations on (1) production which may still be on hand in inventories and (2) production which has left the factory in the form of sales. Hence that portion of cost variance credits earned on goods shipped should be added to profits on the profit and loss statement, while the portion earned on goods still in inventory should be credited to a reserve for inventory valuation to reduce the inventory in process and finished to the lower of cost or

PROFIT AND LOSS STATEMENT

Month of ——————194

		Product			
		Total	*A*	*B*	*C*
60	Sales	—	—	—	—
	Less:				
61	Returns and allowances	—	—	—	—
64	Commissions to agents or jobbers	—	—	—	—
	Total deductions	—	—	—	—
	Net sales	—	—	—	—
67	Cost of sales—manufacturing	—	—	—	—
	Gross profit—anticipated	—	—	—	—
68	Cost of sales—commercial	—	—	—	—
	Operating profit—anticipated	—	—	—	—
	Cost variances:				
690	Material—quantity	—			
691	—price	—			
692	Labor	—			
693	Manufacturing burden—expenditure	—			
	volume	—			
	efficiency	—			
694	Commercial burden	—			
	Total variances	—			
	Operating profit—actual	—			
90	Other income	—			
		—			
91	Other charges	—			
	Net profit—this month	—			
	—to date	—			

EXHIBIT 10

market. At the end of the year all cost variance accounts should be washed out through the year-end closings.

Profit and Loss Statement

The profit and loss statement illustrated in Exhibit 10 will be prepared from the accounts in classifications 6 and 9 of the chart of accounts. It will be noted that sales, cost of sales, and operating

profit anticipated are determined by classes of products. Cost variances and other income and other charges are not allocated to classes of products but are reflected for the business as a whole. This illustrates the point made in a prior section that cost variances should not be allowed to find their way into the cost of sales accounts; otherwise the anticipated profit by sales classifications will not be shown. The cost variances are added to or deducted from the anticipated operating profit to find the actual operating profit. These variances will be supported by proper analyses to enable the management to pass judgment upon the propriety of the cost variances and whether or not action should be taken in those directions. Other income and other charges require no particular explanation.

An analytical profit and loss statement of this type is a must at the end of each month for the small business man. He needs to know not only what was actually made but what should have been earned on the basis of the cost figures used in making operating determinations and in many instances in arriving at selling prices. The orthodox profit and loss statement prepared from taking inventories, while acceptable for financial reporting, does not provide the essential information for management.

Setting the Cost Standards

Material Quantity Standards—Material quantity standards will usually be arrived at from the product specification sheets. Calculations should be made of reasonable standard amounts for each principal material classification. Standards for normal waste should also be carefully determined.

Material Price Standards—A combination of experience and anticipated prices will usually be considered in setting material price standards.

Labor Cost Standards—Time studies should be used as the basis for setting labor costs standards. A time study and rate sheet is illustrated in Exhibit 11. These studies should be by elements in order to filter out possible unnecessary operations or as a means of showing up whether or not the job can be simplified and the work made easier. Time studies by motions do not provide this essential and basic information. The important thing is to study the job and set the labor standards accordingly, instead of studying the motions of any particular operator with the probability of

COOLEY & MARVIN

Client No. _____ — — **TIME STUDY AND RATE SHEET** Rate No.

Date _____ Observer _____ Operator

Department _____ Foreman _____ Operation

Part Name _____ Part No. _____

Machine Name _____ Machine No. _____ Speeds, Feeds, etc. _____

Operator's Rating _____ Experience on job _____ MALE — FEMALE —

ELEMENTS		1	2	3	4	5	6	7	8	9	10	Selected Time: Hr.	Min.	Select
	R													
	T													
	R													
	T													
	R													
	T													
	R													
	T													
	R													
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Begin _____ Finish _____ Overall Time _____ No. Pcs. Produced _____ Time per 100 pcs. _____

Per. and Fatigue Allow.	Total Basic Selected Time	Remarks:
Delay Allowance	Allowances %	
Total Allowances	Total Min. for Units	
Get ready and Setting up Time	Total Min. for 100 Units	
	Allowed Time or P. W. Rate for 100 Units	

Approved: _____

EXHIBIT 11

having the standards thrown out of gear if another operator has to be substituted.

There is no substitute for time studies for this purpose but if they cannot be made available time cards (Exhibit 7) may be used as a basis for developing direct labor data, which may be tabulated for a period of time and estimated labor standards determined. It should be emphasized again, however, that this step should only be taken when time studies are entirely unavailable.

Manufacturing Burden Cost Standards—The manufacturing burden budget, Exhibit 12, is the basis for developing factory burden standards. It will be noted that space is provided at the left of the sheet for all of the accounts shown in classification 7 of the chart of accounts. Next is shown the bases of distributing the amounts to be budgeted in each of these accounts to the departments or burden centers.

The budgeted expenditure for each of these accounts will be inserted in the total column for the year ahead. Columns will be provided at the right of the total column for each of the production burden centers or manufacturing departments and for each of the service and indirect centers which are indicated as (1) maintenance and machinery, (2) building service, (3) general factory, and (4) idle plant. After the total budgeted figures have been distributed to these centers on the bases of distribution indicated and when the amounts of the service or indirect centers have been redistributed to the production burden centers, the total burden in each production burden center will be divided by the standard units of output determined upon to arrive at the burden rates for each production burden center.

In the great majority of small businesses, manufacturing burden can usually be distributed most satisfactorily on the basis of a percentage of direct labor. This is particularly true where a standard cost system is used because the usual objection raised against the method, namely, fluctuating individual labor rates, is absent in a standard cost system. There are, however, instances where the percentage of labor method will not produce satisfactory results and obviously the problem should be studied to determine the correct plan. In general, however, it may be said that the percentage of labor method should never be passed by without making a serious study to determine its practicability.

MANUFACTURING BURDEN BUDGET

	Accounts	*Bases of distribution*	*Total (1 Year)*
700	Factory supervision	General factory	
701	Foremen and assistants	Direct	
702	Inspectors		
703	Methods and engineering	General factory	
704	Factory clerical		
710	Departmental indirect labor		
711	Service labor	Direct	
720	Overtime and shift premiums		
721	Vacations and allowances		
722	Correcting defective work		
723	Pensions and pension plans		
724	Compensation insurance and accidents	Total payroll	
725	Group insurance		
726	Social security taxes		
730	Fuel used	Direct	
731	Power, light and water: Power	Equalized HP Hours	
	Light	Building service	
	Water	Total payroll	
732	Indirect materials		
733	Grease and oil	Direct	
734	General factory supplies		
740	Motor truck expense		
741	Transportation inward	General factory	
743	Research and laboratory		
744	Repairs and maintenance buildings	Building service	
745	Repairs and maintenance machinery	Direct or maintenance	
748	General factory expense	General factory	
790	Fire insurance: Buildings	Building service	
	Machinery	Value	
	Inventories	General factory	
791	Miscellaneous insurance	General factory	
792	Local taxes	Building service	
793	Other taxes	General factory	
794	Depreciation: Buildings	Building service	
	Machinery	Value	
795	Amortization	General factory	
796	Rentals	Building service	
	Totals		
	Maintenance of machinery	Direct or value	
	Building service	Floor area	
	General factory	Total payroll	
	Total burden		
	Units of burden application		
	Burden rates		

Amounts in the total column to be distributed to the following centers on the bases indicated.

1. Production burden centrs:
   - A
   - B
   - C, etc., as required

2. Service and indirect centers:
   - Maintenance of machinery (Redistribute)
   - Building service (Redistribute)
   - General factory (Redistribute)
   - Idle plant (Charge account 916)

EXHIBIT 12

Commercial Burden Cost Standards—Classification 8 on the chart of accounts shows that commercial burden consists of selling expense and administrative expense. These are the expenses beyond the factory door. If the company operates an elaborate sales and distribution organization, a commercial burden budget should be prepared along the lines of the manufacturing burden budget illustrated in Exhibit 12 and the distribution of the total budgeted expenses made to products and/or territories on the most feasible bases. On the other hand, a great many small businesses simply require a percentage of commercial burden to total manufacturing standard cost of sales. The principal point is that a commercial burden budget should be prepared for the accounts indicated in classification 8 of the chart and used for administrative and selling expense control, irrespective of the bases which may be found necessary in the circumstances to absorb these commercial expenses in product costs.

Determining the Cost of Products

Exhibit 13 illustrates form of cost card or cost sheet. One of these will be prepared for each specific product manufactured. These cost cards will represent the standard or predetermined cost of each product and will be developed in accordance with the procedure outlined in prior sections. Since these cost cards show the standard cost of each product they provide the basis for (1) crediting the cost variances accounts and debiting work in process, (2) transferring the cost of shipments from the work in process or finished goods accounts to cost of sales, (3) providing the fundamental data for determining or checking selling prices.

Work in Process and Finished Goods

Raw materials will be carried at actual cost while work in process and finished goods will be carried at standard cost and any differences between actual and standard will be filtered out through the cost variance accounts. With the cost variance accounts in operation it is not necessary to divide the work in process account in the ledger into the three classifications of material, labor, and burden, a procedure which is usually found necessary for analytical purposes if variance accounts are not incorporated in the system. Furthermore, as stated in a preceding paragraph, a finished goods account is not recommended unless local circumstances plainly dictate its need.

COST CARD

Style No. _____

Description

Cost Per

Order No.									
Date									
Material	**Quan.**		**Price**	**Amount**		**Quan.**		**Price**	**Amount**
Lumber									
Finishing Material									
Upholstering Material									
Hardware									
Total Material									
Labor and Burden	**Labor**		**%**	**Burden**		**Labor**		**%**	**Burden**
Mill Room									
Machine and Cabinet									
Finishing									
Upholstering									
Plating									
Packing									
Total Labor and Burden									
Summary Material									
Labor									
Burden									
Total Factory Costs									
Commercial Expense									
Rate									
Amount									
Total Cost									
Add in Deductions									
Total Cost and Sales Deductions									
Selling Price									
Profit									

EXHIBIT 13

Under the suggested plan, transfers are made from the cost variances account to the debit of work in process at standard cost and shipments are credited at standard cost to work in process with offsetting debits to cost of sales. If a separate finished goods account is desired it will simply be necessary to price finished goods production at standard cost and credit the total at the end of the month to work in process with offsetting debits to finished goods, and then credit the cost of sales to the finished goods account instead of to work in process.

Cost of Sales

Manufacturing cost of sales accounts are provided for the various products by classes as illustrated in section 67 of the chart of accounts. Shipments for the month will be priced from the cost cards at standard cost, credited to work in process or finished goods, and debited to the appropriate manufacturing cost of sales accounts. No cost variances or other adjustments should be allowed to enter the cost of sales accounts.

Revising the Standard Costs

A frequent question, particularly in these days of widely fluctuating costs, is: When should the cost standards be revised? If the standard cost system has been properly operated with sound controls, accurate results could be obtained if the standards were never altered. Too frequent adjustment of cost standards can easily ruin the principal value of the system and reduce the results to sets of figures only, representing neither actual costs nor standard costs. Basically the cost standards should be changed only when events transpire which will so alter conditions that the old standards will not be truly representative as standards any more. In general there are four basic situations which may well be responsible for altering the cost standards. These are:

1. Material specifications change.
2. Method of manufacturing changes.
3. Material costs change substantially and apparently permanently.
4. Basic wage rates change substantially and apparently permanently.

Whether or not the standards are changed for these occurrences will depend upon the effect on the long range cost of the products as determined by those in a position to pass informed opinions. But it should be emphasized that standards should never be changed for temporary or minor fluctuations irrespective of magnitude, any more than the time table of an express train will be altered because it happens to run late for a while.

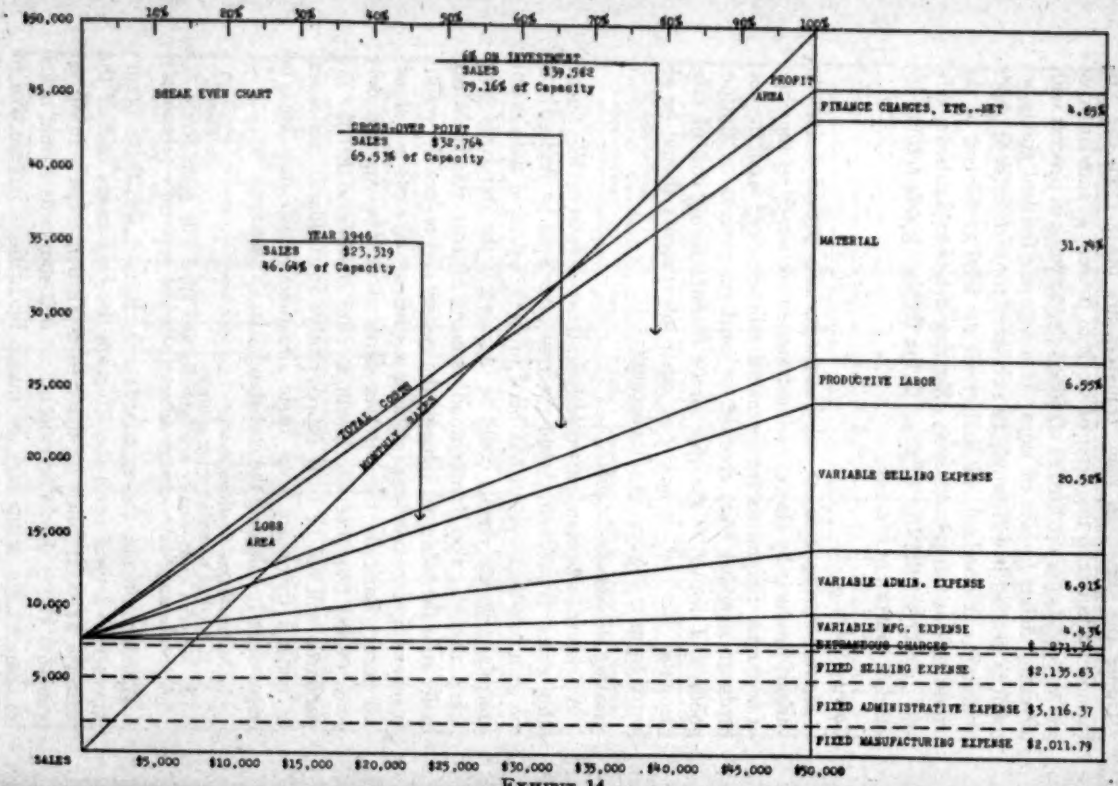
10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
$50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
SALES
$5,000 $10,000 $15,000 $20,000 $25,000 $30,000 $35,000 $40,000 $45,000 $50,000
BREAK EVEN CHART
% ON INVESTMENT
SALES $39,562
79.16% of Capacity
CROSS-OVER POINT
SALES $32,764
65.53% of Capacity
YEAR 1946
SALES $23,319
46.64% of Capacity
TOTAL COSTS
MONTHLY SALES
LOSS AREA
PROFIT AREA
FINANCE CHARGES, ETC.-NET 4.69%
MATERIAL 31.79%
PRODUCTIVE LABOR 6.55%
VARIABLE SELLING EXPENSE 20.58%
VARIABLE ADMIN. EXPENSE 8.91%
VARIABLE MFG. EXPENSE 4.83%
DEPARTMENTAL CHARGES $ 871.36
FIXED SELLING EXPENSE $2,135.83
FIXED ADMINISTRATIVE EXPENSE $5,116.37
FIXED MANUFACTURING EXPENSE $2,011.79

EXHIBIT 14

General Control Techniques

Break-Even Point Chart

A "must" for every small business is a break-even point chart. Naturally the chart to use in the specific situation will depend upon local circumstances but for purposes of illustration, Exhibit 14 is included. All figures used in this chart are entirely fictitious. Costs have increased so much in most companies that a volume level which formerly was sufficient not only to carry the load but also to provide a reasonable profit may not even represent a break-even point. If and when business falls off and prices become increasingly competitive the break-even point chart may prove one of the most valuable tools in management's kit.

Another reason for this chart will immediately present itself if a company has under consideration the allotment of a sizeable portion of the productive facilities to supplying goods to large purchasing units. I raise no argument as to the desirability or otherwise of doing business with large-volume buyers. Our problem is not one of deciding whether or not these large chain buyers and distributors add to or detract from the welfare of our general economy. I simply point out the fundamental necessity of taking business of this kind only after a full consideration of all the facts. The ability to sell a substantial part of the output to a single outlet carries considerable appeal. In the first place, no effort equivalent to selling an equal quantity of goods to a lot of customers is needed. However, it must always be remembered that unless this mass business results in appropriate reductions in the organization which will in turn be reflected in lower administrative and selling expense, the preferential price given the big buyer (which will not absorb the full share of administrative and selling expense) will make it necessary to load this unabsorbed cost on the remaining products of the company thereby inviting sales resistance to regular business. The break-even point chart will show factually the effect of volume on costs and the place occupied in the cost structure by out-of-pocket costs and sunk costs. The important thing is to avoid the pastime too often indulged in of trying to sell enough goods at a loss to make a profit.

A still further question arises concerning the volume level to use as a basis for setting the operating and cost budgets. Fundamentally the standards should be based on the anticipated cost over a period of several years. Under current conditions of high

output levels most small businesses are operating substantially in excess of prewar volume. Naturally the burden budgets and the resulting standard costs will be based on a realistic attempt to appraise the future in terms of the currently changed conditions. But irrespective of the volume level which may be determined upon, it is desirable for the small business man to have a budget prepared on the basis of one-shift operations at 80 per cent of capacity. This would show definitely what would have to be done if business should drop to this level. Not only should a budget be prepared on this basis but a plan of action should be determined upon to place it in effect in the event this problem should arise suddenly.

Job Evaluation

Another "must" for every small business is a job evaluation plan coupled with a merit rating system. The job evaluation will rate the job as such, irrespective of who performs it, while the merit rating system will rate the individual. Having evaluated the job, the values will remain as long as the job lasts unless it is definitely altered. On the other hand, the merit rating system for rating the employees should provide for periodic reconsideration of each individual so that merited promotions shall be granted or merited demotions effected. This review of individual merit ratings can well be done every six months by a committee including representatives of both workers and management. Here again, as in the case of the break-even point chart, this job evaluation and merit rating system will prove invaluable should the unfortunate time arise when it will be necessary to release employees. The merit rating system will provide the data for reaching sound and fair decisions, thus avoiding the hit and miss method which otherwise might and probably would prevail. If the plant is unionized, controversy with labor representatives may be avoided if these facts and figures are readily available.

Another possibility is that of tying in wage incentives with the merit rating system. Cases have been known where an arrangement of this sort was found much better than the old form of individual incentives. I am inclined to believe that in the postwar years there may be a substantial increase in the interest in broader incentives coupled with a merit rating system and a reduction in the use of individual incentives in many small plants and for that matter in large ones as well.

Flexible Budgets

There are three basic reasons why flexible budgets are essential to every small business:

1. To assure adequate working capital.
2. To balance sales and production, which means making deliveries on time.
3. To safeguard the profit and loss results.

The substance of the budget is important, the form is not. Always the question must be kept in mind: What do these budgets contribute to more successful operation?

There are three basic principles of budgeting. The budget must: (1) be prepared in a manner that the operating management can understand and will use as an important tool in operating the business, (2) be projected from three months to a year ahead, and (3) be capable of comparison with the actual results.

The usual business requires seven basic budgets:

1. Sales forecast
2. Plant output budget
3. Material budget
4. Labor budget
5. Burden budget
6. Working capital budget
7. Profit and loss forecast

With these budgets set up on a flexible basis and kept continuously projected ahead, the management will have a picture of what to expect and a timetable for measuring the day to day operations.

Internal Control

Adequate methods of internal control are absent not infrequently in the small business, largely because of the usual high ratio of paper-work transactions to numbers of employees. But frequently internal control possibilities which are inherent in an organization are not fully utilized. The fundamental principle of internal control is that a transaction must pass through the hands of two persons. The result is an automatic check of one employee on another. Things to be guarded against particularly are those situations in which a highly trusted employee or executive has complete control of an entire cycle of work.

The internal control plan should be developed on a highly impersonal basis and reviewed periodically to make sure that it is being followed as intended or if changes have been made as the result of changing conditions that the revised procedure is adequate. If the management of a small business will always keep

in mind the simple principle of splitting up the work in this "person check a person" manner, an important step will have been taken in avoiding frauds. Application of this basic principle is illustrated in the following fundamental procedures.

Incoming Mail and Remittances—Incoming mail should always be opened by a person who handles neither cash nor books of account. This person should prepare a list or a tape of all checks or other remittances received and deliver it to the internal auditor. The checks should then go to the collection clerk or department. From there the checks are sent to the person who prepares the deposit and the appropriate posting media are sent to the bookkeeping clerk or department. The clerk making up the deposit gives the internal auditor the copy of the deposit ticket or tape and sends the deposit to the bank.

Thus the internal auditor has a positive control over funds from their receipt until they are deposited and he can check the duplicate daily deposit slips or tapes against the bank statements if the local situation makes this step necessary or advisable. If there is no internal auditor in the organization then the term treasurer or simply "boss" should be substituted. The principal point is that a break in the cycle of work shall be accomplished.

Proceeds of Cash Sales—Under no conditions should the proceeds of cash sales be turned over to the person who handles the record keeping. This cash should go to the person charged with handling cash or making up the deposit or if the organization is very small to someone other than the one who keeps the records in which the transactions will be recorded. Cash sales should always be billed just like all regular charge sales so that the transaction will get into the flow of work in the normal way.

Disbursement of Funds—All checks for the disbursement of funds should contain signatures of two executives and neither should personally operate any of the records in question. All data supporting each disbursement should be furnished to each of these executives and there should be no exception to this rule. The procedure will not vary whether checks are signed manually or mechanically except that under the latter procedure the signing executive should have strict control over his signature plate. All disbursements other than by check should be made from a properly operated imprest fund.

Receipt and Shipment of Goods—Wherever possible receiving, storing, and shipping should be in charge of separate persons. In small organizations it is sometimes necessary for the receiver to have charge of certain classes of stores. Where this is done, watch should be kept for collusion with vendors or improper delivery of inventories to a truck that has brought in goods. This combination receiver and storekeeper may, if essential, be tolerated but a combination storekeeper and shipper should never be permitted. That step would constitute a direct invitation to common fraud. When goods are delivered to the shipper all documents and packing data should be delivered to the billing department. In this way all knowledge of what to ship must come to the shipper from the billing department and then the shipper must match these data with goods delivered to him from the stores or packing departments.

Under no conditions should billings be made from data supplied by the shipper. Furthermore, the shipper should not have access to the stores or finished goods unless the stores personnel are present. Not infrequently the shipper may have to remain after hours to make shipment of goods packed at the last minute. The stock rooms of finished goods should not be open to him at such periods.

Monthly Statements

The monthly profit and loss statement (Exhibit 10) and the analyses of cost variances should be prepared promptly at the end of every month. These are "must" data. Not infrequently statistical variance information is prepared from week to week, if operating conditions seem to warrant such action. Analysis of the cost variance accounts will develop so much information that the management can determine just what additional data may be desirable in the circumstances.

Many executives want statements of manufacturing and commercial burden. The manufacturing burden will be prepared from the balances in the accounts shown in section 7 of the chart of accounts while the commercial burden statement will be prepared from the data shown in the accounts in section 8.

If a monthly balance sheet is desired it can be prepared readily from the balances in the accounts reflected in sections 1 through 5 of the chart of accounts plus the accumulated balance shown by the statement of profit and loss. If a working capital budget is available regularly, the balance sheet need only be prepared when

needed for specific purposes unless the management wishes to obtain it each month.

The plan of accounting described herein makes possible the preparation of any essential management reports. Care should be taken, however, to prepare and furnish the operating executives with only such reports and data as these men find helpful and valuable in their day to day work. Reports must present live and valuable data to be used currently and not past information to be filed in books and forgotten.

Conclusion

I think we may fairly assume that the volume of business for the present economic cycle in the United States has about hit the top and may be receding. Definitely the party is over. The only question seems to be how much of a readjustment is coming and when. We cannot answer those questions and we would not need to if we could. It is sufficient that businessmen recognize the problem and get their houses in order so that they will be in position to successfully meet the competitive prices and quality demands of a buyers' market which is nearer than many of us may realize.

The small businessman particularly needs the cost accountant. He needs our assistance to help him survive and prosper in the competitive days ahead. He needs realistic costs, not mere bookkeeping costs. I use the word realistic advisedly. I do not mean the collection of historical figures on pretty cards to be used in preparing post mortem information of operations which, while interesting as history, may be of small value in aiding the man on the firing line in solving today's problems not yesterday's conditions.

Management needs information continuously available which will enable the executives to keep fingers on the operating pulse and know how far ahead or behind the schedule the business is at all times, based on the timetable of predetermined normal or standard costs. In other words, costs in advance and reasons why they were not lived up to, rather than tabulations of historical figures too little and too late when so much time has elapsed that nothing can be done about unsatisfactory situations. The excuse for writing this article is that it may perhaps be a small contribution to this end.

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